Altitude™ 4522 Series Access Point Installation Guide

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CHAPTER

Introduction

The Altitude™ 4522 Access Point, a component of the Extreme Networks® Wireless Mobility System, links wireless 802.11a/b/g/n devices to the Summit® WM3000 Series Controller, enabling growth of your wireless network with a cost effective alternative to standard Access Points. The Altitude 4522 Access Point provides multiple deployment options.

The Altitude 4522 Access Point receives all power and transfers data through the same CAT-5 or better Ethernet cable. An 802.3af Ethernet controller or power supply specifically rated for the Altitude 4522 Access Point is required (Part No. PWRS-14000-148R).

An Altitude 4522 Access Point uses Extreme Networks Altitude® network management software as its onboard operating system. The Access Point's unique software enables the Access Point to function as either a Virtual Controller AP capable of adopting and managing up to 24 additional Altitude 4522 Access Points, a standalone Access Point or a dependent mode Access Point managed by its connected controller.

If new to Extreme Networks Access Point technology, refer to the *Altitude Access Point System Reference Guide* to familiarize yourself with Access Point technology and the feature set supported by the Altitude network management software. The guide is available, at http://www.extremenetworks.com/go/documentation.

This guide applies to Extreme Networks Model Number AP4522 Series Access Points. The Altitude 4522 Access Point is approved under MODEL: AP-0622. This document is written for the qualified network device installer.

Document Conventions

The following graphical alerts are used in this document to indicate notable situations:

NOTE

Tips, hints, or special requirements that you should take note of.

CAUTION

Care is required. Disregarding a caution can result in data loss or equipment malfunction.

WARNING!

Indicates a condition or procedure that could result in personal injury or equipment damage.

Warnings

- Read all installation instructions and site survey reports, and verify correct equipment installation before connecting the Access Point.
- Remove jewelry and watches before installing this equipment.
- Verify that the unit is grounded before connecting it to the power source.
- Verify that any device connected to this unit is properly wired and grounded.
- Verify that there is adequate ventilation around the device, and that ambient temperatures meet equipment operation specifications.

Site Preparation

- Consult your site survey and network analysis reports to determine specific equipment placement, power drops, and so on.
- Assign installation responsibility to the appropriate personnel.
- Identify and document where all installed components are located.
- Ensure adequate, dust-free ventilation to all installed equipment.
- Identify and prepare Ethernet and console port connections.
- Verify that cable lengths are within the maximum allowable distances for optimal signal transmission.

Package Contents

An Altitude 4522 Access Point is available in integrated antenna and external antenna models. Contents differ depending on the model ordered.

External Antenna Model Package Contents

- Altitude 4522 Access Point with external antenna connectors (Plenum Rated)
- 2 customer installed mounting lugs
- 4 mounting lug retaining screws
- *Altitude™ 4522 Series Access Point Installation Guide* (this guide)

Internal Antenna Model Package Contents

- Altitude 4522 Access Point with internal antennas
- *Altitude™ 4522 Series Access Point Installation Guide* (this guide)

Features

- 2 RJ-45 connectors, one for 10/100/1000 Ethernet and another for the serial/console connector
- LED indicators
- Slots for wall mounting
- Clips for mounting on a suspended ceiling T-bar (internal antenna model only) with separately orderable accessories
- Lock port for Kensington® style Security Lock

The Altitude 4522 Access Point has one RJ-45 connector supporting an 10/100/1000 Ethernet port and accepts 802.3af-compliant power from an external source. The following illustration is of an integrated antenna model.
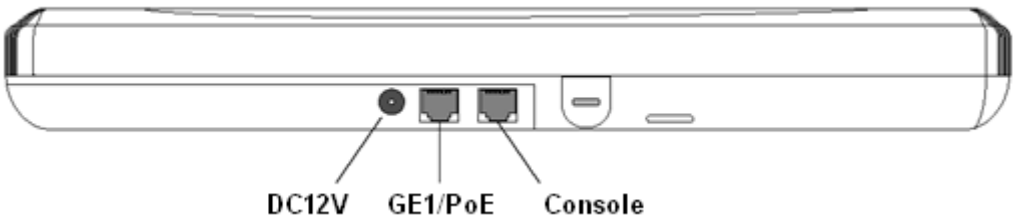
DC12V   GE1/PoE   Console

> **NOTE**
>
> When operating in a Gigabit Ethernet environment, CAT-5e or CAT-6 cable is recommended for Gigabit operation.

The Altitude 4522 Access Point comes with dual radios supporting 802.11abgn. The Access Point contains runtime firmware which enables the unit to boot after a power up. The runtime firmware on the Access Point and the firmware downloaded from the connected controller can be updated by using the Ethernet interface. The console port settings are shown in the following table:

Bit Rate (bits/sec)	115000
Data Bits	8
Parity	None
Stop Bits	1
Flow Control	None

2 Hardware Installation

CHAPTER

Installation Instructions

The Altitude 4522 Access Point mounts either on a wall (with customer supplied M4 x 25 pan head screws and wall anchor - or equivalent) or on a suspended ceiling T-bar. If you are deploying an external antenna model, the Altitude 4522 Access Point on a suspended ceiling T-bar, the Access Point mounting kit (Part No. KT-135628-01) is required. The Altitude 4522 Access Point is not designed for mounting on a desk.

To prepare for the installation:

1 Match the model number on the purchase order with the model numbers in the packing list and on the case of the Access Point.

SKU	Part Number	Description
4522i-US	15993	Dual 802.11n radio Altitude 4522 Access Point. Plastic enclosure with internal antennas. For use in the US deployments only.
4522i-ROW	15994	Dual 802.11n radio Altitude 4522 Access Point. Plastic enclosure with internal antennas. For use in non-US countries only.
4522i-EU	15815	Dual 802.11n radio Altitude 4522 Access Point. Plastic enclosure with internal antennas. For deployment in European regulatory domain only.
4522e-US	15995	Dual 802.11n radio Altitude 4522 Access Point. Metal enclosure with external antenna connectors. For use in US deployments only.
4522e-ROW	15996	Dual 802.11n radio Altitude 4522 Access Point. Metal enclosure with external antenna connectors. For use in non-US countries only.
4522e-EU	15816	Dual 802.11n radio Altitude 4522 Access Point. Metal enclosure with external antenna connectors. For deployment in European regulatory domain only.

> **NOTE**
>
> In the above part numbers, a country code of "ROW" represents a world wide model, "EU" is for use in the European Union regulatory domain. "US" defines the model as only legally deployable in the United States.

2 Verify that the contents of the box include the intended Altitude 4522 Access Point, and the included hardware matches the package contents (see).

3 Review site survey and network analysis reports to determine the location and mounting position for the Altitude 4522 Access Point.

4 Connect a CAT-5 or better Ethernet cable to a compatible 802.3af power source and run the cable to the installation site. Ensure that there is sufficient slack on the cable to perform the installation steps.

> **NOTE**
>
> When operating in a Gigabit Ethernet environment, CAT-5e or CAT-6 cable is recommended for Gigabit operation.

Precautions

Before installing an Altitude 4522 Access Point, verify the following:

● You are using the correctly rated DC power supply for the Altitude 4522 Access Point (Part No. PWRS-14000-148R)

● Extreme Networks recommends that you do not install the Altitude 4522 Access Point in wet or dusty areas.

● Verify that the environment has a continuous temperature range between 0° C to 40° C.

Access Point Placement

For optimal performance, install the Access Point away from transformers, heavy-duty motors, fluorescent lights, microwave ovens, refrigerators, or other industrial equipment.

Signal loss can occur when metal, concrete, walls, or floors block transmission. Install the Access Point in an open area or add Access Points as needed to improve coverage.

Antenna coverage is analogous to lighting. Users might find an area lit from far away to be not bright enough. An area lit sharply might minimize coverage and create *dark areas.* Uniform antenna placement in an area (like even placement of a light bulb) provides even, efficient coverage.

Place the Access Point using the following guidelines:

● Install the Access Point at an ideal height of 10 feet from the ground.

● Orient the Access Point antennas vertically for best reception (applies to external antenna models only).

To maximize the Access Point's radio coverage area, Extreme Networks recommends conducting a site survey to define and document radio interference obstacles before installing the Access Point.

Integrated Antenna Model Wall Mount Instructions

Wall mounting requires hanging the Altitude 4522 Access Point along its width or length using the two slots on the bottom of the unit. The Altitude 4522 Access Point can be mounted on to any plaster, wood, or cement wall surface using customer supplied screw hardware (M3.5 x 0.6 x 20 mm- or equivalent).

Wall Mount Hardware

● Two wide-shoulder Phillips pan head self-tapping screws (customer supplied)

● Two wall anchors (customer supplied)

● Security cable (optional)

NOTE

The following screws are recommended: (ANSI Standard) #6-18 X 0.875in. Type A or AB Self-Tapping Screw, or (ANSI Standard Metric) M3.5 X 0.6 X 20mm Type D Self-Tapping Screw.

Wall Mount Procedure

connectors
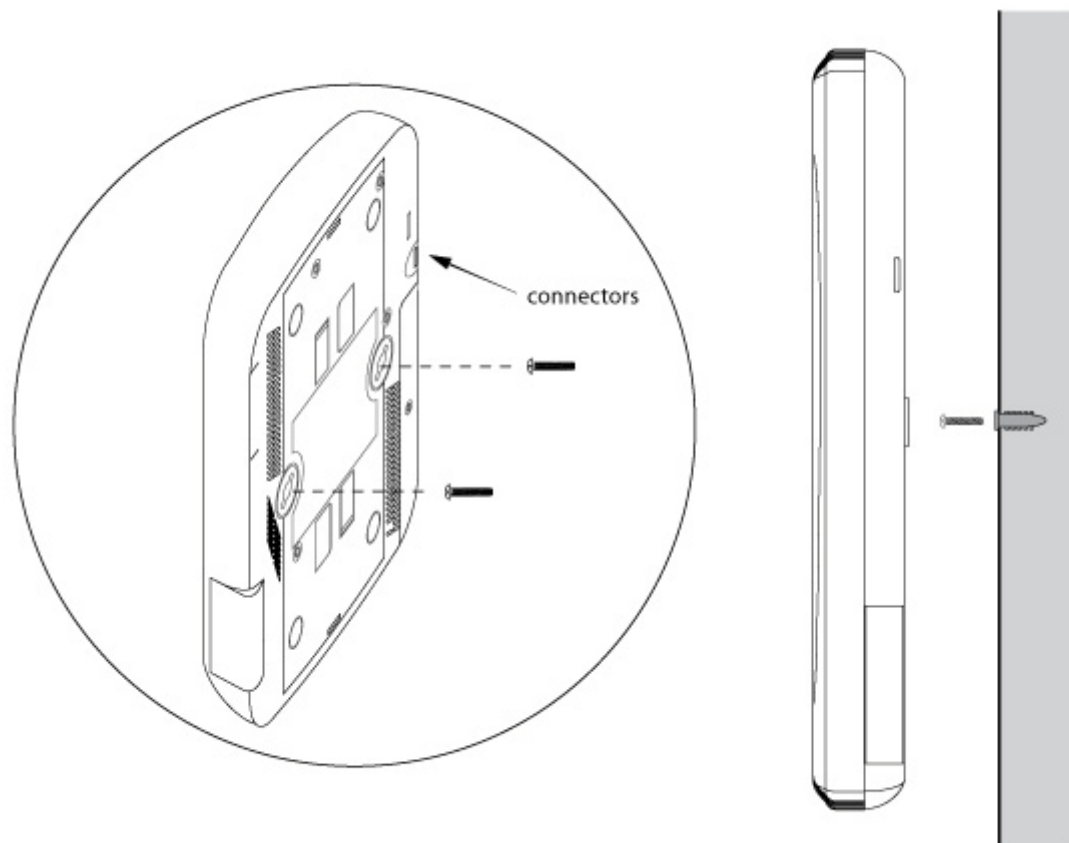
1 Orient the case on the wall by its width or length.

LEDs

Correct Orientation   Incorrect Orientation

LEDs
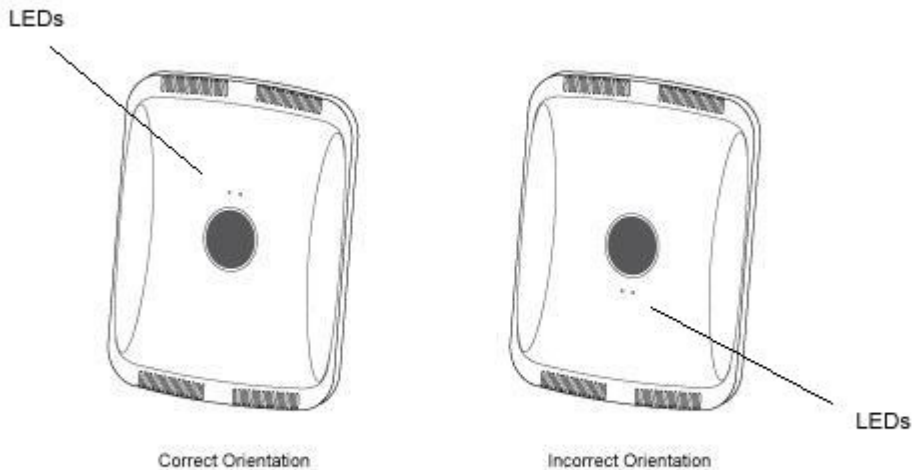
CAUTION

To ensure proper operation of an Altitude 4522 Access Point, ensure that it is mounted in the correct orientation as shown above.

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2 Mark two points (for drill holes) 4.08 inches (103.7 mm) apart on a horizontal line.

3 At each point, drill a hole in the wall, insert an anchor, screw into the anchor the wall mounting screw and stop when there is 1mm between the screw head and the wall.

NOTE

When pre-drilling a hole, the recommended hole size is 2.8mm (0.11in.).

---

4   If required, install and attach a Kensington security cable (customer supplied) to the unit's lock port.

5   Attach an Ethernet cable from the Access Point to a controller with an 802.3af-compatible power source or use the PWRS-14000-148R power supply to supply power to the Altitude 4522 Access Point (once fully cabled).

6   Place the middle of each of the case's mount slots over the screw heads.

7   Slide the case down along the mounting surface to hang the mount slots on the screw heads.

8   Verify that the unit has power by observing that the LEDs are lit or flashing.

CAUTION

If you are not using a 802.3af capable controller to power the Altitude 4522 Access Point, ensure that only the Altitude 4522 Access Point's designated power supply (PWRS-14000-148R) is used. Using an incorrectly rated power supply could damage the unit and void the product warranty. Do not actually connect to the power source until the cabling portion of the installation is complete.

Integrated Antenna Model Suspended Ceiling T-Bar Mount

Ceiling mount requires holding the Altitude 4522 Access Point up against a T-bar of a suspended ceiling grid and twisting the case onto the T-bar.

Suspended Ceiling T-Bar Mount Procedure
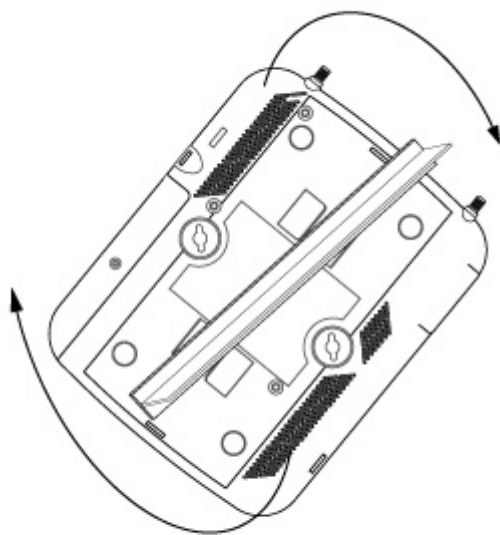
Plastic Under Ceiling Mount A   Plastic Under Ceiling Mount B
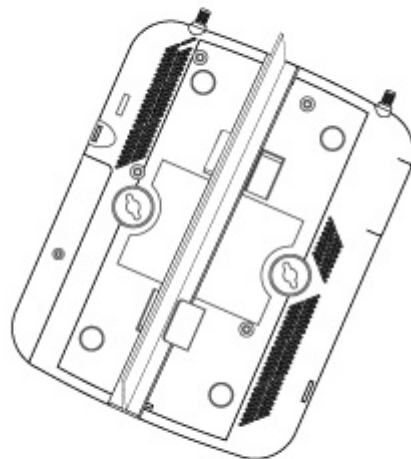
1 If required, install and attach a Kensington security cable (customer supplied) to the unit's lock port.

2 Attach an Ethernet cable from the Access Point to a controller with an 802.3af compatible power source or use the PWRS-14000-148R power supply to supply power to the Altitude 4522 Access Point (once fully cabled).

3 Align the bottom of the T-bar with the back of the case.

4   Orient the case by its length, and the length of the T-bar.

5   Rotate the case 45 degrees clockwise, or about 10 o'clock.

6   Push the back of the case onto the bottom of the T-bar.

7   Rotate the case 45 degrees counter-clockwise. The clips click as they fasten to the T-bar.

8   Verify that the unit has power by observing the LEDs.

CAUTION

If you are not using a 802.3af capable controller to power the Altitude 4522 Access Point, ensure that only the Altitude 4522 Access Point's designated power supply (PWRS-14000-148R) is used. Using an incorrectly rated power supply could damage the unit and void the product warranty. Do not actually connect to the power source until the cabling portion of the installation is complete.

External Antenna Model Wall Mount Instructions

A wall mount deployment requires hanging the Altitude 4522 Access Point along its width or length using the pair of slots on the bottom of the unit. The Altitude 4522 Access Point can be mounted on to any plaster, wood, or cement wall surface using the provided wall anchors.

Wall Mount Hardware

● Two customer provided wide-shoulder Phillips pan head self-tapping screws (M3.5 x 0.6 x 20 mm)

● Two wall anchors (customer supplied)

● Security cable (optional)

NOTE

The following screws are recommended: (ANSI Standard) #6-18 X 0.875in. Type A or AB Self-Tapping Screw, or (ANSI Standard Metric) M3.5 X 0.6 X 20mm Type D Self-Tapping Screw.

Wall Mount Procedure - New Installation

This section describes a new Altitude 4522 Access Point installation with no previous Access Point existing on the intended wall surface.

1   Attach the two provided mounting ears (using four ear mounting screws) to the two narrow ens of the Altitude 4522 Access Point. Align the ears using the built in ear alignment pin on the Access Point housing. Torque the screws to 6 lb-in.
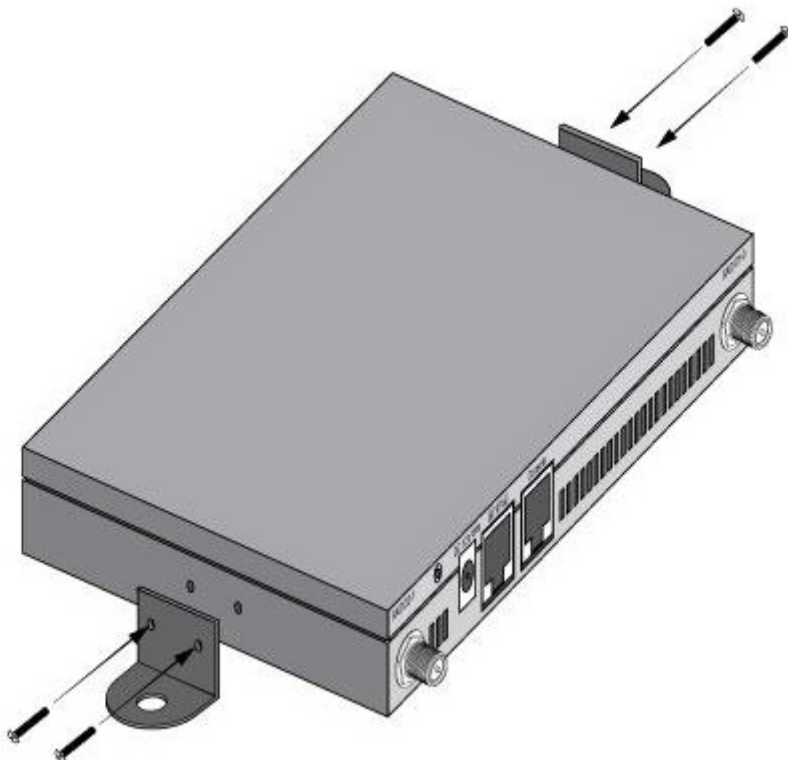
2   Place the Access Point against the wall, ensuring that the Access Point's Extreme Networks logo is oriented upward.

3   Mark the screw hole locations on a vertical axis using the ear's mounting holes.

4   At each point, drill a hole in the wall and insert the anchor.

> **NOTE**
>
> When pre-drilling a hole, the recommended hole size is 2.8mm (0.11in.).

5 Place the Access Point on the anchor. Insert screws through the Access Point's mounting ears and into the anchor.

6 If required, install and attach a Kensington security cable (customer supplied) to the unit's lock port.

7 Attach an Ethernet cable from the Access Point to a controller with an 802.3af-compatible power source or use the PWRS-14000-148R power supply to supply power to the Altitude 4522 Access Point (once fully cabled).

8 Attach appropriate antennas to the connectors.

9 Attach an Ethernet cable from the Access Point to a controller with an 802.3af compatible power source.

10 Verify that the Access Point is receiving power by observing that the LEDs are lit or flashing.

> **CAUTION**
>
> If you are not using a 802.3af capable controller to power the Altitude 4522 Access Point, ensure that only the Altitude 4522 Access Point's designated power supply (PWRS-14000-148R) is used. Using an incorrectly rated power supply could damage the unit and void the product warranty. Do not actually connect to the power source until the cabling portion of the installation is complete.

Wall Mount Procedure - Existing Access Point Replacement

An external antenna Altitude 4600 Series Access Point, installed on a wall (plenum installation), can be replaced by an Altitude 4522 Access Point. Simply remove the legacy Access Point from its mounting screws, leave the mounting hardware in place and install the new external antenna Altitude 4522 Access Point directly on to the existing mounting hardware. The cabling procedure for such a replacement is the same as described in the previous section.

External Antenna Model Suspended Ceiling T-Bar Mount

Ceiling mount requires holding the Altitude 4522 Access Point up against a T-bar of a suspended ceiling grid and twisting the case onto the T-bar. If you are deploying an external antenna model Altitude 4522 Access Point on a ceiling T-Bar, the Access Point mounting kit (Part No. KT-135628-01) or ceiling mount hardware (SCT-2) is required.

Suspended Ceiling T-Bar Mount Procedure - Using Mounting Kit

The following installation uses the Access Point mounting kit (Part No. KT-135628-01) to deploy the Access Point on a ceiling T-Bar.

1 If required, install and attach a Kensington security cable (customer provided) to the unit's lock port.

2 Using only the mounting bracket from the mounting kit, rotate and click the mounting bracket into the mounting slots on the Altitude 4522 Access Point.

3 Attach an Ethernet cable from the Access Point to a controller with an 802.3af compatible power source or use the PWRS-14000-148R power supply to supply power to the Altitude 4522 Access Point (once fully cabled).

4 With the ceiling tile raised, slip the T-Bar bracket on to the exposed T-Bar flange.

5 Lower the ceiling tile and verify the stability of the T-Bar mounting bracket connection. There will be no stability in this assembly until the ceiling tile is lowered on to the T-Bar to secure the mounting hardware.

6 Verify that the unit has power by observing the LEDs.

CAUTION

If you are not using a 802.3af capable controller to power the Altitude 4522 Access Point, ensure that only the Altitude 4522 Access Point's designated power supply (PWRS-14000-148R) is used. Using an incorrectly rated power supply could damage the unit and void the product warranty. Do not actually connect to the power source until the cabling portion of the installation is complete.

Suspended Ceiling T-Bar Mount Procedure - Using Ceiling Mount Hardware

The following installation uses the Access Point ceiling mounting kit (Part No. SCT-2) to deploy the Access Point on a ceiling T-Bar.

1 If required, install and attach a Kensington security cable (customer provided) to the unit's lock port.

2 Remove nut from the SCT-2 kit and place assembly and screw through Access Point mounting ear.

3 Place the clips from the SCT-2 ceiling mount kit over ceiling T-Bar.

4 Tighten clips using provided nuts.

5   Attach an Ethernet cable from the Access Point to a controller with an 802.3af compatible power source or use the PWRS-14000-148R power supply to supply power to the Altitude 4522 Access Point (once fully cabled).

6   Attach appropriate antennas to the connectors.

7   Attach an Ethernet cable from the Access Point to the controller with an 802.3af compatible power source.

8   Verify the unit has power by observing the LEDs.
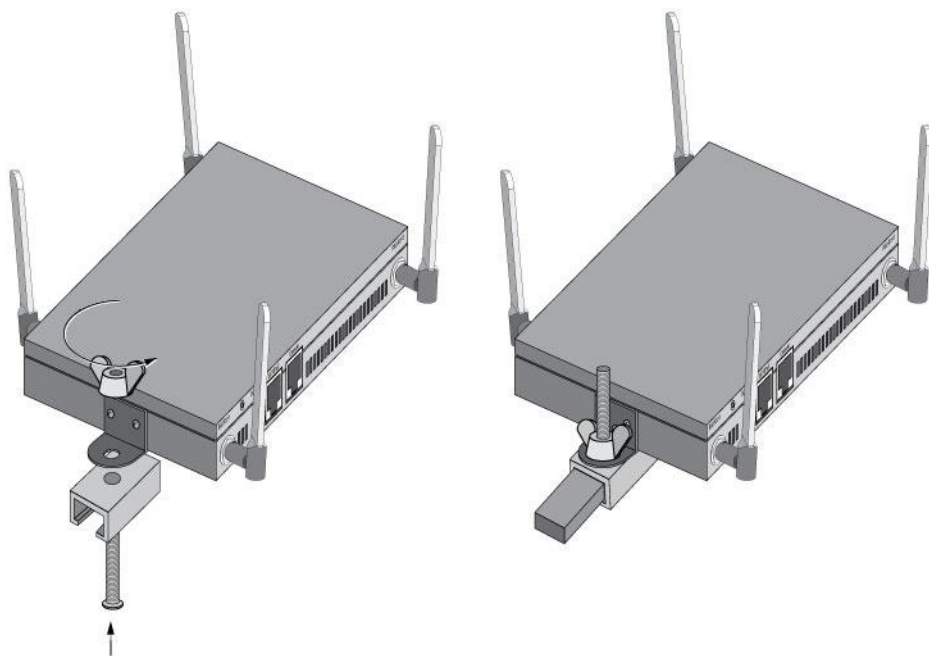
CAUTION

If you are not using a 802.3af capable controller to power the Altitude 4522 Access Point, ensure that only the Altitude 4522 Access Point's designated power supply (PWRS-14000-148R) is used. Using an incorrectly rated power supply could damage the unit and void the product warranty. Do not actually connect to the power source until the cabling portion of the installation is complete.

External Antenna Suspended Ceiling Tile (Plenum) Mount

Ceiling mount requires placing the Altitude 4522 Access Point above suspended ceiling tile.

NOTE

Notes or warnings about suspended ceiling mounts apply to all installations where the unit is placed on suspended ceiling tile.

CAUTION

Extreme Networks does not recommend mounting the Altitude 4522 Access Point directly to any suspended ceiling tile with a thickness less than 12.7mm (0.5in.) or a suspended ceiling tile with an unsupported span greater than 660mm (26in.). Extreme Networks strongly recommends fitting the Altitude 4522 Access Point with the supplied mounting ears and hanging the Access Point on a pipe or beam.

Suspended Ceiling Mount Hardware

● Security cable (optional)

● Mounting ears

● Customer supplied pipe or channel clamps

Ceiling Mount Procedure

1   If possible, remove the ceiling tile from its frame and place it, finish side down, on a work surface.

2   If required, install and attach a Kensington security cable (customer provided) to the unit's lock port.

3   Place the Access Point on the ceiling tile or attach to a plenum beam or pipe using industry available clamps.

4   Attach appropriate antennas to the connectors.

5   Bring the tile into the ceiling space.

6   Attach an Ethernet cable from the Access Point to a controller with an 802.3af compatible power source or use the PWRS-14000-148R power supply to supply power to the Altitude 4522 Access Point (once fully cabled).

7   Verify that the Access Point is receiving power by observing the LEDs.

8   Place the ceiling tile back in its frame.

CAUTION

If you are not using a 802.3af capable controller to power the Altitude 4522 Access Point, ensure that only the Altitude 4522 Access Point's designated power supply (PWRS-14000-148R) is used. Using an incorrectly rated power supply could damage the unit and void the product warranty. Do not actually connect to the power source until the cabling portion of the installation is complete.

Altitude 4522 Access Point External Antenna Model Antenna Options

Extreme Networks supports two antenna suites for Altitude 4522 Access Point External Antenna models. One antenna suite supporting the 2.4 GHz band and another antenna suite

supporting the 5 GHz band. Select an antenna model best suited for the intended operational environment of your Access Point. For example, model ML-2452-APA2-01, as shown in the picture below, is a popular dual-band, omni-directional antenna for typical indoor coverage.

For a more exhaustive overview of the antennas supported by the Extreme Networks Access Point family, refer to the *Enterprise Wireless LAN Antenna Specification Guide* and *Enterprise Wireless LAN Antenna Specification Guide Addendum* documents available from **http://www.extremenetworks.com/go/documentation**.

LED Indicators

Both, Integrated Antenna and External Antenna models, have LED activity indicators on the front of the case. With the External Antenna models mounted above a ceiling, LEDs are at the center of an oval badge on the ceiling.
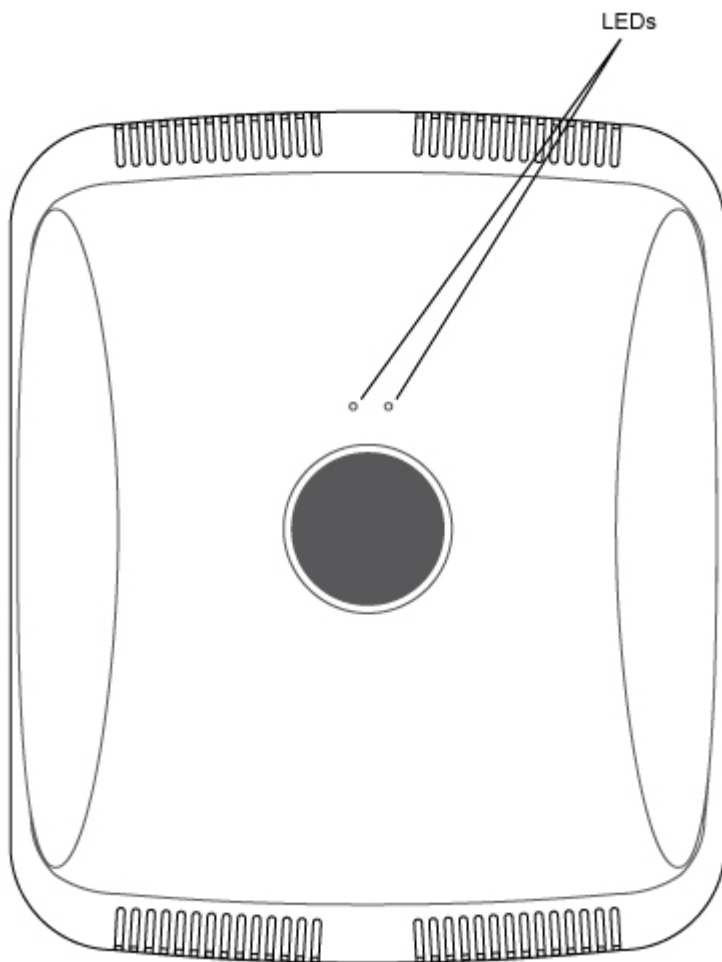
The LEDs provide a status display indicating error conditions, transmission, and network activity for the 5 GHz 802.11an (amber) radio or the 2.4 GHz 802.11bgn (green) radio.

Task	5 GHz Activity LED (Amber)	2.4 GHz Activity LED (Green)
Unadopted	Off	Blinking at 5Hz
Normal Operation	If this radio band is enabled: Blink at 5 second interval	If this radio band is enabled: Blink at 5 second interval
	If this radio band is disabled: Off	If this radio band is disabled: Off
	If there is activity on this band: Blink at a 1Hz	If there is activity on this band: Blink at a 1Hz
Firmware Update	On	Off
Sensor Mode	Blink at 5 times a second	Blink at 5 times a second

3 CHAPTER

Initial Access Point Configuration

Once the Access Point is installed and powered on, complete the following steps to get the device up and running by using the Initial Setup Wizard:

1   Attach an Ethernet cable from the Access Point to a controller with an 802.3af compatible power source or use the PWRS-14000-148R power supply to supply power to the Altitude 4522 Access Point (once fully cabled).

   If your host system is a DHCP server, an IP address is automatically assigned to the Altitude 4522 Access Point and can be used for device connection. However, if a DHCP server is not available, you will need to derive the IP address from the Altitude 4522 Access Point MAC address. Using this method, the last two bytes of the Altitude 4522 Access Point MAC address become the last two octets of the IP address.

   For Example:
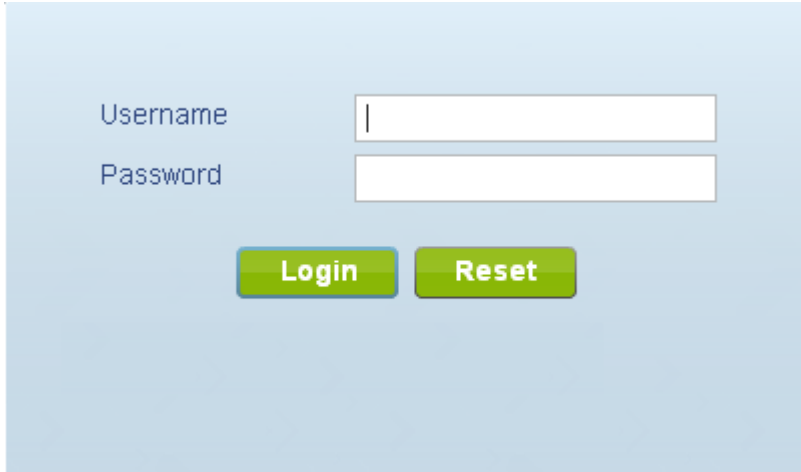
   MAC address - 00:C0:23:00:F0:0A
   IP address equivalent - 169.254.240.10

   To derive the Altitude 4522 Access Point's IP address using its factory assigned MAC address:

   a   Open the Windows calculator be selecting *Start > All Programs > Accessories > Calculator*. This menu path may vary depending on your version of Windows.

   b   With the Calculator displayed, select *View > Scientific*. Select the *Hex* radio button.

   c   Enter a hex byte of the Altitude 4522 Access Point's MAC address. For example, F0.

   d   Select the *Dec* radio button. The calculator converts F0 into 240. Repeat this process for the last Altitude 4522 Access Point MAC address octet.

2 Point the Web browser to the Altitude 4522 Access Point's IP address (using https://). The following login screen displays.

3 Enter the default username *admin* in the *Username* field.

4 Enter the default password *admin123* in the *Password* field.

5 Click the *Login* button to load the management interface.

NOTE

When logging in for the first time, you are prompted to change the password to enhance device security in subsequent logins.

NOTE

If you get disconnected while running the wizard, you can connect again with the Access Point's actual IP address (once obtained) and resume the wizard.

6 Select the *Start Wizard* button to run the initial setup wizard.

The setup wizard displays the first time the Altitude 4522 Access Point user interface is accessed in order to define the Altitude 4522 Access Point's initial configuration.

An initial setup wizard is available to aid in configuring a simple WLAN deployment. The wizard will guide configuration of the following features:

1. Access Point Type
2. Bridge or Router Operation
3. LAN Configuration
4. Radio Mapping
5. WAN Configuration
6. Wireless LAN Configuration
7. Location, Country, and Time Zone

Would you like to use the wizard?

Start Wizard   Not Now   Never

7 If this is the first time the management interface has been accessed, a dialogue displays to start the wizard. Select *Start Wizard* to run the wizard

The first page of the Initial AP Setup Wizard displays the *Navigation Panel* and *Introduction* for the configuration activities comprising the Access Point's initial setup.
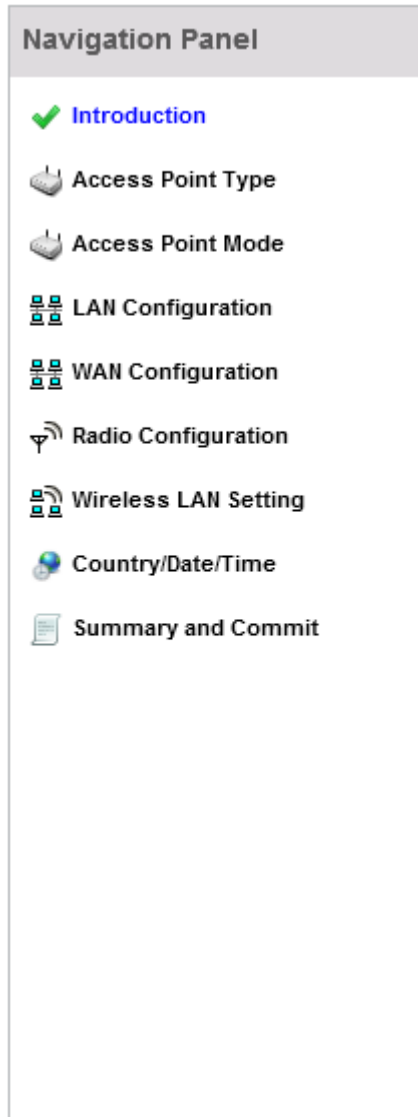
A green checkmark to the left of an item in the Navigation Panel defines the listed task as having its minimum required configuration parameters set correctly. A red X defines the task as still requiring at least one parameter be defined correctly.

The Introduction screen displays a list of the basic configuration activities supported by the Initial Setup Wizard.
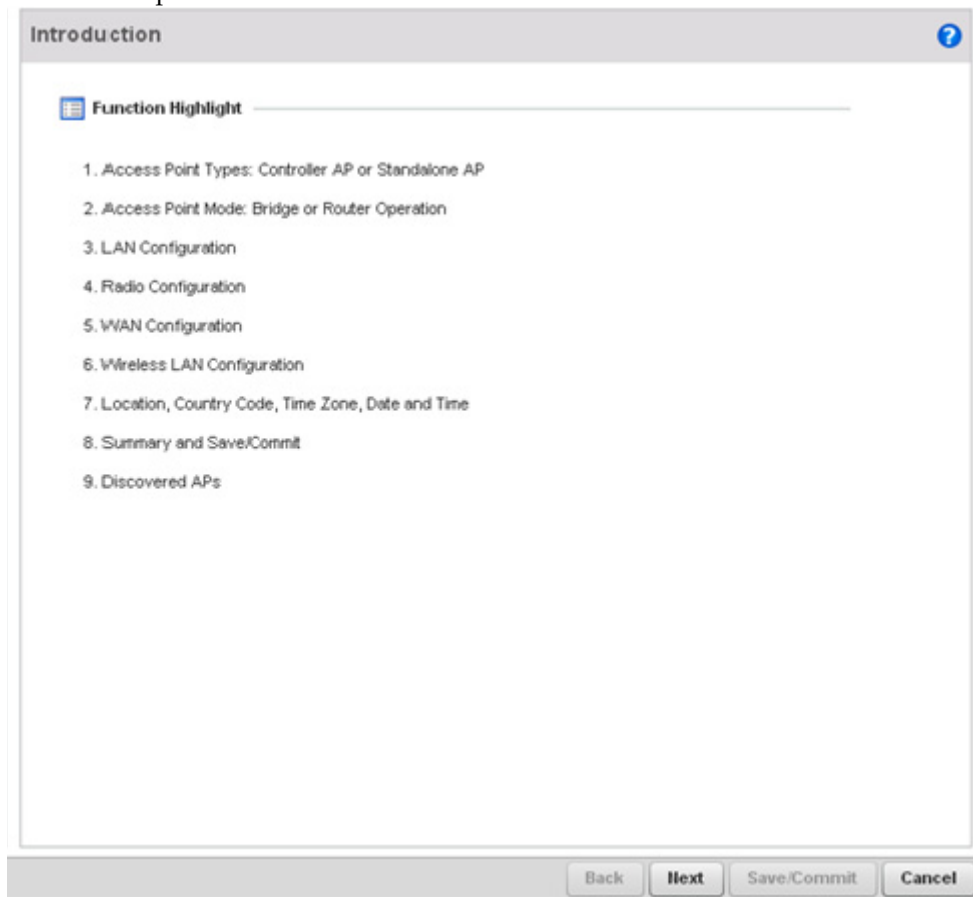
8 Select *Save/Commit* within each page to save the updates made to that page's configuration. Select *Next* to proceed to the next page listed in the Navigation Panel. Select *Back* to revert to the previous screen in the Navigation Panel without saving your updates.

> **NOTE**
>
> While you can navigate to any page in the navigation panel, you cannot complete the Initial AP Setup Wizard until each task in the Navigation Panel has a green checkmark.

9 Select *Next*. The Initial AP Setup Wizard displays the *Access Point Type* screen to define the Access Point's Standalone versus Virtual Controller AP functionality and the way the Access Point is adopted to a controller.

Access Point Type

Access Point Type Selection

○ Virtual Controller AP - When multiple access points are deployed, a single access point can function as a Virtual Controller AP and manage other access points. The Virtual Controller AP can adopt and configure other access points of the same model in a 24-cell (maximum) deployment.

○ Standalone AP - Select this option to deploy this access point as an autonomous "fat" access point. A standalone AP isn't managed by a Virtual Controller AP, or adopted by a controller.

○ Adopted to Controller - Select this option when you want the AP to adopt to a controller. The AP will discover L2 connected controllers automatically. It will also try to discover controllers over L3 using DHCP or DNS discovery mechanism. For this, no further configuration is required on the AP. Please see the System Reference Guide for details on how to setup your DHCP or DNS server to enable this. If the AP is not on the same L2 segment as the controller and your network is not setup for DHCP or DNS based discover, you can specify the controller IP manually below.

Back   Next   Save/Commit   Cancel

10 Select an *Access Point Type* from the following options:

● *Virtual Controller AP* - When more than one Access Point is deployed, a single Access Point can function as a Virtual Controller AP. Up to 24 Access Points can be connected to, and managed by, a single Virtual Controller AP of the same Altitude 4522 Access Point model.

● *Standalone AP* -Select this option to deploy this Access Point as an autonomous fat Access Point. A Standalone AP isn't managed by a Virtual Controller AP, or adopted by a controller.

> **NOTE**
>
> If you are designating the Access Point as a Standalone AP, Extreme Networks recommends that the Access Point's UI, and not the CLI, be used exclusively to define its device configuration. The CLI provides the ability to define more than one profile and the UI does not. Consequently, the two interfaces cannot be used collectively to manage profiles without an administrator encountering problems.

● *Adopted to Controller* - Select this option when deploying the Access Point as a controller managed (Dependent mode) Access Point. Selecting this option closes the Initial AP Setup Wizard. An adopted Access Point obtains its configuration from a profile stored on its managing controller. Any manual configuration changes are overwritten by the controller upon reboot.

Select the *Automatic controller discovery* option to enable the Access Point to be discovered and adopted using layer 2 settings. If you prefer layer 3 adoption, select the *Static Controller Configuration* option, and define the addresses of the preferred controllers.

If you are using the static method, you will also need to define whether the Access Point receives an IP address using DHCP or if IP resources are provided statically.

Access Point Type

Access Point Type Selection

○ Virtual Controller AP - When multiple access points are deployed, a single access point can function as a Virtual Controller AP and manage other access points. The Virtual Controller AP can adopt and configure other access points of the same model in a 24-cell (maximum) deployment.

○ Standalone AP - Select this option to deploy this access point as an autonomous "fat" access point. A standalone AP isn't managed by a Virtual Controller AP, or adopted by a controller.

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Adoption Settings

○ Automatic controller discovery (L2, DHCP or DNS based)

⊙ Static Controller Configuration

Controller 1 ✱ `172 . 168 . 0 . 20`   Controller 2 `. . .`

AP IP Address

○ Use DHCP   ⊙ Static IP Address/Subnet   ✱ `192 . 168 . 0 . 1 / 24` ▾

Default Gateway   ✱ `192 . 168 . 0 . 1`
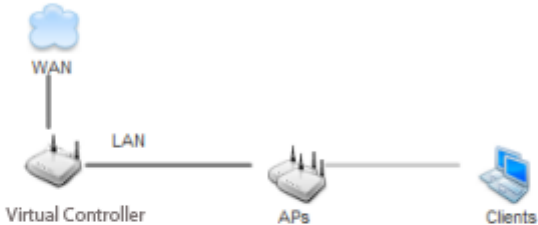
[Back] [Next] [Save/Commit] [Cancel]

11 Select *Next*. The Initial AP Setup Wizard displays the *Access Point Mode* screen to define the Access Point's routing or bridging mode functionality.

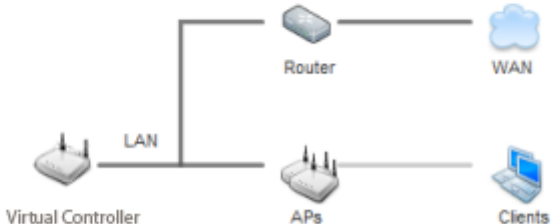**12** Select an *Access Point Mode* from the available options.

- *Router Mode* - In Router Mode, the Access Point routes traffic between the *local network* (LAN) and the Internet or *external network* (WAN). Router mode is recommended in a deployment supported by just a single Access Point.

- *Bridge Mode* - In Bridge Mode, the AP depends on an external router for routing LAN and WAN traffic. Routing is generally used on one device, whereas bridging is typically used in a larger network. Thus, select Bridge Mode when deploying this Access Point with numerous peer APs supporting clients on both the 2.4 and 5GHz radio bands.
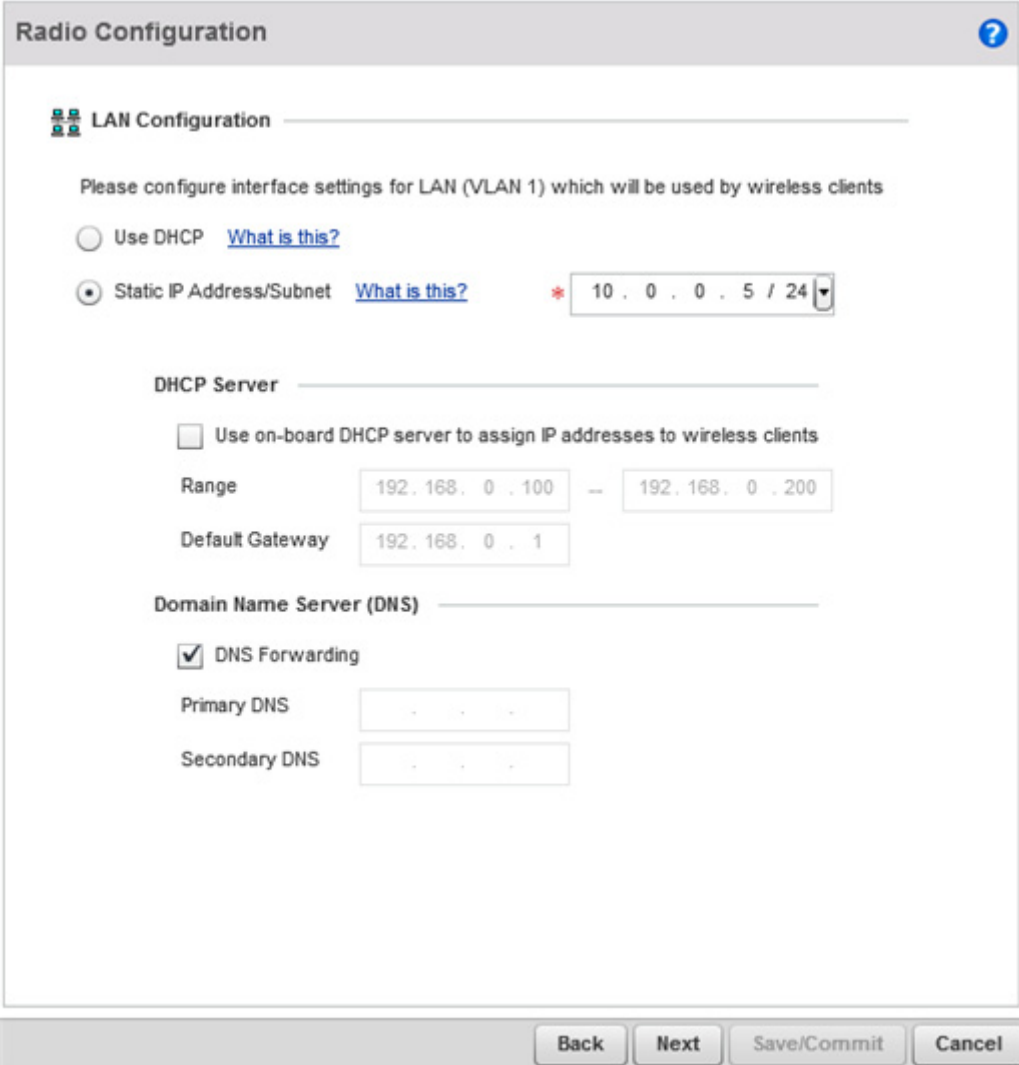
13 Select *Next*. The Initial AP Setup Wizard displays the *LAN Configuration* screen to set the Access Point's LAN interface configuration.

14 Set the following DHCP and Static IP Address/Subnet information for the LAN
   interface:

   ● *Use DHCP* - Select the checkbox to enable an automatic network address
     configuration using the Access Point's DHCP server.

   ● *Static IP Address/Subnet* - Enter an IP Address and a subnet for the Access Point's
     LAN interface. If Use DHCP is selected, this field is not available. When selecting this
     option, define the following *DHCP Server* and *Domain Name Server (DNS)* resources,
     as those fields will become enabled on the bottom portion of the screen.

     - *Use on-board DHCP server to assign IP addresses to wireless clients* -Select the
       checkbox to enable the Access Point's DHCP server to provide IP and DNS
       information to clients on the LAN interface.

     - *Range* - Enter a starting and ending IP Address range for client assignments on the
       LAN interface. Avoid assigning IP addresses from x.x.x.1 - x.x.x.10 and x.x.x.255,
       as they are often reserved for standard network services. This is a required
       parameter.

     - *Default Gateway* - Define a default gateway address for use with the default
       gateway. This is a required parameter.

   ● *DNS Forwarding* - Select this option to allow a DNS server to translate domain names
     into IP addresses. If this option is not selected, a primary and secondary DNS
     resource must be specified. DNS forwarding is useful when a request for a domain
     name is made but the DNS server, responsible for converting the name into its
     corresponding IP address, cannot locate the matching IP address.

     - *Primary DNS* - Enter an IP Address for the main Domain Name Server providing
       DNS services for the Access Point's LAN interface.

     - *Secondary DNS* - Enter an IP Address for the backup Domain Name Server
       providing DNS services for the Access Point's LAN interface.

15 Select *Next*. The Initial AP Setup Wizard displays the *WAN Configuration* screen to set the Access Point's WAN interface configuration.

WAN Configuration ❓

🖧 WAN Configuration

Please configure interface settings for WAN port

- ◉ Use DHCP   What is this?

- ◯ Static IP Address/Subnet   0 . 0 . 0 . 0 / 24 ▾   What is this?

  Default Gateway   [. . .]

The port connected to the WAN   ◉ GE1 Port   What is this?

◯ GE2 Port   What is this?

☐ Enable NAT on the WAN Interface   What is this?

| Back | Next | Save/Commit | Cancel |

16 Set the following DHCP and Static IP Address/Subnet information for the WAN interface:

- *Use DHCP* - Select the checkbox to enable an automatic network address configuration using the Access Point's DHCP server.

- *Static IP Address/Subnet* - Enter an IP Address/Subnet and gateway for the Access Point's WAN interface. These are required fields

- *The port connected to the WAN* - Select the port used as the physical Access Point connection to the external network. The ports available differ depending on the Access Point model deployed. Access Point models with a single port have this option fixed.

- *Enable NAT on the WAN Interface* - Select the checkbox to allow traffic to pass between the Access Point's WAN and LAN interfaces.

17 Select *Next*. The Initial AP Setup Wizard displays the *Radio Configuration* screen to define support for the 2.4GHz radio band, 5GHz radio band or to set the radio's functionality as a dedicated sensor.

18 Set the following parameters for the radio:

● *Configure as a Data Radio* - Select this option to dedicate this radio for WLAN client support in either the selected 2.4 or 5 GHz radio band.

   - *Radio Frequency Band* - Select either the 2.4 GHz or 5.0 GHz radio band to use with the radio when selected as a Data Radio. The selected band is used for WLAN client support. Considers selecting one radio for 2.4 GHz and another for 5 GHz support (if using a dual radio model) when supporting clients in both the 802.11bg and 802.11n bands.

   - *Power Level* - Use the spinner control to select a 1 - 23 dBm minimum power level to assign to this radio in selected 2.4 or 5.0 GHz band. 1 dBm is the default setting.

   - *Channel Mode* - Select either *Random*, *Best* or *Static*. Select *Random* for use with a 802.11an radio. To comply with *Dynamic Frequency Selection* (DFS) requirements in the European Union, the 802.11an radio uses a randomly selected channel each time the Access Point is powered on.
   Select *Best* to enable the Access Point to scan non-overlapping channels and listen for beacons from other Access Points. After the channels are scanned, it will select the channel with the fewest Access Points. In the case of multiple Access Points on the same channel, it will select the channel with the lowest average power level. When *Constantly Monitor* is selected, the Access Point will continuously scan the network for excessive noise and sources of interference. Select *Static* to assign the Access Point a permanent channel and scan for noise and interference only when initialized.

● *Configure as a Sensor Radio* - Select this option to dedicate the radio to sensor support exclusively. When functioning as a sensor, the radio scans in sensor mode across all channels within the 2.4 and 5.0 GHz bands to identify potential threats within the Access Point managed network. If you are dedicating a radio as a sensor resource, you must specify a primary and secondary ADSP server as an ADSP management resource.

● *Disable the Radio* - Select this option to disable this radio, thus prohibiting it from either providing WLAN or sensor support. Before rendering the radio offline, verify this course of action with your network administrator.

19 Select *Next*. The Initial AP Setup Wizard displays the *Wireless LAN Setting* screen to define network address and security settings for two WLAN configurations available to the Access Point as part of the Initial Setup Wizard. Once the Access Point has an initial configuration defined, numerous additional WLAN configurations can be set.

20 Set the following parameters for each of the two WLAN configurations available as part of this Initial AP Setup Wizard:

- *SSID* - Enter or modify the *Services Set Identification* (SSID) associated with the WLAN. The WLAN name is auto-generated using the SSID until changed by the user. The maximum number of characters is 32. Do not use < > | " & \ ? , This is a required parameter for each WLAN.

- *WLAN Type* - Set the data protection scheme used by clients and Access Points within the WLAN. The following options are available:

    - *No Authentication and no Encryption* - Select this option to provide no security between the Access Point and connected clients on this WLAN.

    - *Captive Portal Authentication and No Encryption* - Select this option to use a Web page (either internally or externally hosted) to authenticate users before access is granted to the network. If using this option, define whether a local or external RADIUS authentication resource is used.

    - *PSK Authentication and WPA2 Encryption* - Select the option to implement a pre-shared key that must be correctly shared between the Access Point and requesting clients using this WLAN. If using this option, specify a WPA key in either ASCII (8-63 characters) or HEX (64 characters) format.

    - *EAP Authentication and WPA2 Encryption* - Select this option to authenticate clients within this WLAN through the exchange and verification of certificates. If you are using this option, define whether a local or external RADIUS authentication resource is used.

- *WPA Key* - If a WPA key is required (PSK Authentication and WPA2 Encryption), enter an alphanumeric string of 8 to 63 ASCII characters or 64 HEX characters as the primary string both transmitting and receiving authenticators must share. The alphanumeric string allows character spaces. This passphrase saves the administrator from entering the 256-bit key each time keys are generated.

- *RADIUS Server* - If the WLAN requires a RADIUS server to validate user credentials, designate whether the Access Point is using an *External RADIUS Server* resource or the Access Point's own *Onboard RADIUS Server*. If you are using an external RADIUS server resource, provide the IP address of the external server and the shared secret used to authenticate the request.

> ## NOTE
>
> If you are using the Access Point's onboard RADIUS server, an additional *RADIUS Server Configuration* screen displays within the Navigation Panel on the left-hand side of the screen. Use this screen to create user accounts validated when the Access Point authenticates client connection requests to the onboard RADIUS server.

21 Select *Next*. The Initial AP Setup Wizard displays the *RADIUS Server Configuration* screen if the Access Point's onboard RADIUS server is required to validate user requests. If an onboard RADIUS server is not required, the Initial AP Setup Wizard displays the *Country/Date/Time* screen to set device deployment, administrative contact and system time information.

22 Refer to the *Username*, *Password*, *Description,* and *Actions* columns to review credentials of existing RADIUS Server user accounts. Add new accounts or edit the properties of existing accounts as updates are required.

23 Refer to the *Add On-Board RADIUS Server Users* field to set the following parameters for a user account:

- *Username* - If you are adding a new user account, create a username up to X characters in length. The username cannot be revised if modifying the user configuration. This is a required parameter.

- *Password* - Provide (or modify) a password between X - X characters in length entered each time a requesting client attempts access to the AP managed network using the Access Point's onboard RADIUS server. This is a required parameter.

- *Confirm Password* - Re-enter (or modify) the password as a means of confirming the password. This is a required parameter.

- *Description* - Optionally provide a description of the user account as means of further differentiating it from others.

24 When completed, select *Add User* to commit a new user, *Modify User* to commit a modified user or *Reset* to clear the screen without updating the configuration. Selecting Reset clears the field of all entered user account information.

25 Select *Next*. The Initial AP Setup Wizard displays the *Country/Date/Time* screen to set device deployment, administrative contact and system time information. The system time can either be set manually or be supplied by a dedicated *Network Time Protocol* (NTP) resource.

26 Refer to the *Country and Time Zone* field to set the following device deployment information:

- *Location* - Define the location of the Access Point. The Location parameter acts as a reminder of where the AP is deployed within the Extreme Networks managed wireless network.

- *Contact* - Specify the contact information for the administrator. The credentials provided should accurately reflect the individual responding to service queries.

- *Country* - Select the Country where the Access Point is deployed. The Access Point prompts for the correct country code on the first login. A warning message also displays stating an incorrect country setting may result in illegal radio operation. Selecting the correct country is central to legal operation. Each country has its own regulatory restrictions concerning electromagnetic emissions and the maximum RF signal strength that can be transmitted. This is a required parameter.

- *Time Zone* - Set the time zone where the Access Point is deployed. This is a required parameter. The setting should be complimentary with the selected deployment country.

27 If an NTP resource is unavailable, set the *System Date and Time* (calendar date, time, and AM/PM designation).

28 Optionally enter the IP address of a server used to provide system time to the Access Point. Once the IP address is entered, the *Network Time Protocol (NTP)* functionality is engaged automatically for synchronization with the NTP resource.

29 If an NTP resource is unavailable, set the *System Date and Time* (calendar date, time, and AM/PM designation).

30 Optionally, enter the IP address of a server used to provide system time to the Access Point. Once the IP address is entered, the *Network Time Protocol (NTP)* functionality is automatically engaged for synchronization with the NTP resource.

31 Select *Next*. The Initial AP Setup Wizard displays the *Summary and Commit* screen to summarize the screens (pages) and settings updated using the Initial AP Setup Wizard.

No user intervention or additional settings are required within this screen. It is a means of validating the configuration before its deployed.

If a screen shows settings not intended as part of the initial configuration, the screen can be selected from within the Navigation Panel and its settings modified accordingly.

32 If the configuration displays as intended, select the *Save/Commit* button to implement these settings to the Access Point's configuration. If additional changes are warranted based on the summary, either select the target page from the Navigational Panel, or use the *Back* and *Next* buttons to scroll to the target screen

For information on how use an Extreme Networks Summit® Series controller to manage an Altitude 4522 Access Point, refer to http://www.extremenetworks.com/go/documentation.

Altitude™ 4522 Series Access Point Installation Guide

4

CHAPTER

Specifications

Altitude 4522 Access Point Integrated Antenna Model Electrical Characteristics

An Altitude 4522 Access Point Integrated Antenna model has the following electrical characteristics:

Operating Current & Voltage	12VDC, 1A (accessory power connector)
	48V,0.25A (PoE connector)

Altitude 4522 Access Point Integrated Antenna Model Physical Characteristics

An Altitude 4522 Access Point Integrated Antenna model has the following physical characteristics:

Dimensions	9.38 inches x 7.5 inches x 1.38 inches
	23.82 cm x 19.50 cm x 3.50 cm
Housing	Plastic
Weight	0.90 lbs / 0.40 kg
Operating Temperature	32°F to 104°F/0°C to 40°C
Storage Temperature	-40°F to 185°F/-40°C to 85°C
Operating Humidity	5 to 95% Relative Humidity non-condensing

Storage Humidity	85% Relative Humidity non-condensing
Operating Altitude (max)	8,000 ft @ 28C
Storage Altitude (max)	30,000 ft @ 12C
Electrostatic Discharge	+/-15kV Air and +/-8kV Contact @ 50% Relative Humidity

Altitude 4522 Access Point External Antenna Model Electrical Characteristics

An Altitude 4522 Access Point External Antenna model has the following electrical characteristics:

Operating Current & Voltage	12VDC, 1A (accessory power connector)
	48V,0.25A (PoE connector)

Altitude 4522 Access Point External Antenna Model Physical Characteristics

An Altitude 4522 Access Point External Antenna model has the following physical characteristics:

Dimensions	7.88 inches x 5.00 inches x 1.00 inches
	20.01 cm x 12.70 cm x 2.54 cm
Housing	Metal
Weight	1.45 lbs / 0.65 kg
Operating Temperature	32°F to 104°F/0°C to 40°C
Storage Temperature	-40°F to 185°F/-40°C to 85°C
Operating Humidity	5 to 95% Relative Humidity non-condensing
Storage Humidity	85% Relative Humidity non-condensing

Operating Altitude (max)	8,000 ft @ 28C
Storage Altitude (max)	30,000 ft @ 12C
Electrostatic Discharge	+/-15kV Air and +/-8kV Contact @ 50% Relative Humidity

Radio Characteristics

The Altitude 4522 Access Point have the following radio characteristics:

Operating Channels	All channels from 4920 MHz to 5825 MHz
	Channels 1-13 (2412-2472 MHz)
	Channel 14 (2484 MHz) Japan only
	Actual operating frequencies depend on regulatory approval for the country of use.
Data Rates Supported	802.11b: 1,2,5.5,11Mbps
	802.11g: 1,2,5.5,11,6,9,12,18,24,36,48, and 54Mbps
	802.11a: 6,9,12,18,24,36,48, and 54Mbps
	802.11n: MCS 0-15 up to 300Mbps
Wireless Medium	Direct Sequence Spread Spectrum (DSSS),
	Orthogonal Frequency Division Multiplexing (OFDM)
	Spatial multiplexing (MIMO)
Network Standards	802.11a, 802.11b, 802.11g, 802.3, 802.11n (Draft 2.0)
Maximum Available Transmit Power	Maximum available conducted transmit power per chain: 2.4 GHz: 21dBm
	Maximum available conducted transmit power all chains: 2.4 GHz: 24dBm
	Maximum available conducted transmit power per chain: 5 GHz: 19dBm
	Maximum available conducted transmit power all chains: 5 GHz: 22dBm
Transmit Power Adjustment	1dB increments

5
CHAPTER

Regulatory Information

This device is approved under the Symbol Technologies, Inc. brand: Symbol Technologies, Inc. is a wholly owned subsidiary of Motorola Solutions, Inc. (collectively "Motorola").

This guide applies to Extreme Networks Model Number AP4522 Series Access Points. The Altitude 4522 Access Point is approved under MODEL: AP-0622.

All Extreme Networks devices are designed to be compliant with rules and regulations in the locations they are sold and will be labeled as required.

Any changes or modifications to Extreme Networks equipment, not expressly approved by Extreme Networks, could void the user's authority to operate the equipment.

Extreme Networks Access Points must be professionally installed and configured so that the Radio Frequency Output Power will not exceed the maximum allowable limit for the country of operation.

Antennas: Use only the supplied or an approved replacement antenna. Unauthorized antennas, modifications, or attachments could cause damage and may violate regulations.

This device should be used only with an Extreme Networks Wireless Controller.

Country Approvals

Regulatory markings, subject to certification, are applied to the device signifying the radio(s) is/are approved for use in the following countries: United States, Canada, Japan, China, S. Korea, Australia, and Europe.

Refer to the *Declaration of Conformity* (DoC) for details of other country markings. This is available at http://www.extremenetworks.com/go/rfcertification.htm.

Note: For 2.4GHz or 5GHz Products: Europe includes, Austria, Belgium, Bulgaria, Czech Republic, Cyprus, Denmark, Estonia, FinlFor 2.4GHz or 5GHz Products: Europe includes, Austria, Belgium, Bulgaria, Czech Republic, Cyprus, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

Operation of the device without regulatory approval is illegal.

Country Selection

Select only the country in which you are using the device. Any other selection will make the operation of this device illegal.

Frequency of Operation – FCC and IC

You are reminded of the need to observe restrictions on the use of radio devices in fuel depots, chemical plants etc. and areas where the air contains chemicals or particles (such as grain, dust, or metal powders).

5 GHz Only

The use in the UNII (Unlicensed National Information Infrastructure) band 1 (5150-5250 MHz) is restricted to Indoor Use Only; any other use will make the operation of this device illegal.

Industry Canada Statement:

Caution: The device for the band 5150-5250 MHz is only for indoor usage to reduce potential for harmful interference to co-Channel mobile satellite systems. High power radars are allocated as primary users (meaning they have priority) of 5250-5350 MHz and 5650-5850 MHz and these radars could cause interference and/or damage to LE-LAN devices.

Altitude™ 4522 Series Access Point Installation Guide

Avertissement: Le dispositif fonctionnant dans la bande 5150-5250 MHz est réservé uniquement pour une utilisation à l'intérieur afin de réduire les risques de brouillage préjudiciable aux systèmes de satellites mobiles utilisant les mêmes canaux.

Les utilisateurs de radars de haute puissance sont désignés utilisateurs principaux (c.-à-d., qu'ils ont la priorité) pour les bands 5250-5350 MHz et 5650-5850 MHz et que ces radars pourraient causer du brouillage et/ou des dommages aux dispositifs LAN-EL.

Health and Safety Recommendations

Warnings for Use of Wireless Devices

Please observe <u>all</u> warning notices with regard to the usage of wireless devices.

Potentially Hazardous Atmospheres - Fixed Installations

You are reminded of the need to observe restrictions on the use of radio devices in fuel depots, chemical plants etc. and areas where the air contains chemicals or particles (such as grain, dust, or metal powders).

Safety in Hospitals

Wireless devices transmit radio frequency energy and may affect medical electrical equipment. When installed adjacent to other equipment, it is advised to verify that the adjacent equipment is not adversely affected.

Pacemakers

Pacemaker manufacturers recommended that a minimum of 15cm (6 inches) be maintained between a handheld wireless device and a pacemaker to avoid potential interference with the pacemaker. These recommendations are consistent with independent research and recommendations by Wireless Technology Research.

Persons with Pacemakers:

● Should ALWAYS keep the device more than 15cm (6 inches) from their pacemaker when turned ON.

● Should not carry the device in a breast pocket.

● Should use the ear furthest from the pacemaker to minimize the potential for interference.

● If you have any reason to suspect that interference is taking place, turn OFF your device.

Other Medical Devices

Please consult your physician or the manufacturer of the medical device, to determine if the operation of your wireless product may interfere with the medical device.

⚠ RF Exposure Guidelines

Safety Information

Reducing RF Exposure - Use Properly

Only operate the device in accordance with the instructions supplied.

International

The device complies with internationally recognized standards covering human exposure to electromagnetic fields from radio devices. For information on "International" human exposure to eletromagnic fields refer to the Extreme Networks *Declaration of Conformity* (DoC) at http://www.extremenetworks.com/go/rfcertification.htm.

EU

Remote and Standalone Antenna Configurations

To comply with EU RF exposure requirements, antennas that are mounted externally at remote locations or operating near users at stand-alone desktop of similar configurations must operate with a minimum separation distance of 20 cm from all persons.

US and Canada

Co-located statement

To comply with FCC RF exposure compliance requirement, the antennas used for this transmitter must not be co-located or operating in conjunction with any other transmitter/antenna except those already approved in this filling.

Remote and Standalone Antenna Configurations

To comply with FCC RF exposure requirements, antennas that are mounted externally at remote locations or operating near users at stand-alone desktop of similar configurations must operate with a minimum separation distance of 20 cm from all persons.

Power Supply

Use ONLY a LISTED Motorola, Type no. PWRS-14000-148R (12VDC @ 4.16A), direct plug-in power supply, marked Class 2 (IEC60950-1, SELV).

This device can be powered from a 802.3af compliant power source which is certified by the appropriate agencies.

Use of alternative Power Supply will invalidate any approvals given to this unit and may be dangerous.

Wireless Devices - Countries

Country Selection

Select only the country in which you are using the device. Any other selection will make the operation of this device illegal.

> **NOTE**
>
> The US only models (4522i-US and 4522e-US) have the country code permanently set to the US. The ROW models (4522i-ROW and 4522e-ROW) and EU models (4522i-EU and 4522e-EU) cannot be configured for use in the US.

Operation in the US and Canada

The use on UNII (Unlicensed National Information Infrastructure) Band 1 5150-5250 MHz is restricted to indoor use only, any other use will make the operation of this device illegal.

The available channels for 802.11 bg operation in the US are Channels 1 to 11. The range of channels is limited by firmware.

Radio Frequency Interference Requirements—FCC

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

● Reorient or relocate the receiving antenna

● Increase the separation between the equipment and receiver

- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio/TV technician for help.

Radio Transmitters (Part 15)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Radio Frequency Interference Requirements – Canada

This Class B digital apparatus complies with Canadian ICES-003.

Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Radio Transmitters

For RLAN Devices:

The use of 5 GHz RLAN's, for use in Canada, have the following restrictions:

- Restricted Band 5.60 – 5.65 GHz

This device complies with RSS 210 of Industry Canada. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.

Ce dispositif est conforme à la norme CNR-210 d'Industrie Canada applicable aux appareils radio exempts de licence. Son fonctionnement est sujet aux deux conditions suivantes: (1) le dispositif ne doit pas produire de brouillage préjudiciable, et (2) ce dispositif doit accepter tout brouillage reçu, y compris un brouillage susceptible de provoquer un fonctionnement indésirable.

Label Marking: The Term "IC:" before the radio certification signifies that Industry Canada technical specifications were met.

CE Marking and European Economic Area (EEA)

The use of 2.4GHz RLAN's, for use through the EEA, have the following restrictions:

● Maximum radiated transmit power of 100 mW EIRP in the frequency range 2.400 -2.4835 GHz.

● France outside usage, the equipment is restricted to 2.400-2.45 GHz frequency range.

● Italy requires a user license for outside usage.

Statement of Compliance

Extreme Networks hereby, declares that this device is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC. A Declaration of Conformity may be obtained from http://www.extremenetworks.com/go/rfcertification.htm.

Korea Warning Statement for Class B

기 종 별§	사 용 자 안 내 문§
B급 기기〈 (가정용 방송통신기기)§	이 기기는 가정용 (B 급) 으로 전자파적합등록을¶ 한 기기로서 주로 가정에서 사용하는 것을 목적¶ 으로 하며 , 모든 지역에서 사용할 수 있습니다 §
Class B (Broadcasting Communication Device for Home Use) §	This device obtained EMC registration mainly for home use (Class B) and may be used in all areas.§

Other Countries

Australia

Use of 5GHz RLAN's in Australia is restricted in the following band 5.50 – 5.65GHz.

Brazil

Declarações Regulamentares para AP6522 - Brasil

Nota: A marca de certificação se aplica ao Transceptor, modelo AP6522. Este equipamento opera em caráter secundário, isto é, não tem direito a proteção contra interferência prejudicial, mesmo de estações do mesmo tipo, e não pode causar interferência a sistemas operando em caráter primário. Para maiores informações sobre ANATEL consulte o site: *www.anatel.gov.br*

Chile

Este equipo cumple con la Resolución No 403 de 2008, de la Subsecretaria de telecomunicaciones, relativa a radiaciones electromagnéticas.

Mexico

Restrict Frequency Range to: 2.450 – 2.4835 GHz.

Taiwan

臺灣

低功率電波輻射性電機管理辦法

第十二條
經型式認證合格之低功率射頻電機，非經許可，公司、商號或使用者均不得擅自變更頻率、加大功率或變更原設計之特性及功能。

第十四條

低功率射頻電機之使用不得影響飛航安全及干擾合法通信；經發現有干擾現象時，應立即停用，並改善至無干擾時方得繼續使用。
前項合法通信，指依電信規定作業之無線電通信。
低功率射頻電機須忍受合法通信或工業、科學及醫療用電波輻射性電機設備之干擾。

在 5.25-5.35 秭赫頻帶內操作之無線資訊傳輸設備，限於室內使用

Korea

당해 무선설비는 운용 중 전파혼신 가능성이 있음¶

당해 무선설비 는전파혼 신 가능성이 있으므로 인명안전과 관련된 서비스는 할 수 없습니다 .

Turkish WEEE Statement of Compliance

EEE Yönetmeliğine Uygundur

Waste Electrical and Electronic Equipment (WEEE)

English: For EU Customers: All products at the end of their life must be returned to Extreme Networks for recycling. For information on how to return product, please go to: http://www.extremenetworks.com/go/eu-weee.

Français: Clients de l'Union Européenne: Tous les produits en fin de cycle de vie doivent être retournés à Extreme Networks pour recyclage. Pour de plus amples informations sur le retour de produits, consultez : http://www.extremenetworks.com/go/eu-weee.

Español: Para clientes en la Unión Europea: todos los productos deberán entregarse a Extreme Networks al final de su ciclo de vida para que sean reciclados. Si desea más información sobre cómo devolver un producto, visite: http://www.extremenetworks.com/go/eu-weee.

Bulgarish: За клиенти от ЕС: След края на полезния им живот всички продукти трябва да се връщат на Extreme Networks за рециклиране. За информация относно връщането на продукти, моля отидете на адрес: http://www.extremenetworks.com/go/eu-weee.

Deutsch: Für Kunden innerhalb der EU: Alle Produkte müssen am Ende ihrer Lebensdauer zum Recycling an Extreme Networks zurückgesandt werden. Informationen zur Rücksendung von Produkten finden Sie unter http://www.extremenetworks.com/go/eu-weee.

Italiano: per i clienti dell'UE: tutti i prodotti che sono giunti al termine del rispettivo ciclo di vita devono essere restituiti a Extreme Networks al fine di consentirne il riciclaggio. Per informazioni sulle modalità di restituzione, visitare il seguente sito Web: http://www.extremenetworks.com/go/eu-weee.

Português: Para clientes da UE: todos os produtos no fim de vida devem ser devolvidos à Extreme Networks para reciclagem. Para obter informações sobre como devolver o produto, visite: http://www.extremenetworks.com/go/eu-weee.

Nederlands: Voor klanten in de EU: alle producten dienen aan het einde van hun levensduur naar Extreme Networks te worden teruggezonden voor recycling. Raadpleeg http://www.extremenetworks.com/go/eu-weee voor meer informatie over het terugzenden van producten.

Polski: Klienci z obszaru Unii Europejskiej: Produkty wycofane z eksploatacji nale¿y zwróciæ do firmy Extreme Networks w celu ich utylizacji. Informacje na temat zwrotu produktów znajduj¹ siê na stronie internetowej http://www.extremenetworks.com/go/eu-weee.

Čeština: Pro zákazníky z EU: Všechny produkty je nutné po skonèení jejich životnosti vrátit spoleènosti Extreme Networks k recyklaci. Informace o zpùsobu vrácení produktu najdete na webové stránce: http://www.extremenetworks.com/go/eu-weee.

Eesti: EL klientidele: kõik tooted tuleb nende eluea lõppedes tagastada taaskasutamise eesmärgil Extreme Networks'ile. Lisainformatsiooni saamiseks toote tagastamise kohta külastage palun aadressi: http://www.extremenetworks.com/go/eu-weee.

Magyar: Az EU-ban vásárlóknak: Minden tönkrement terméket a Extreme Networks vállalathoz kell eljuttatni újrahasznosítás céljából. A termék visszajuttatásának módjával kapcsolatos tudnivalókért látogasson el a http://www.extremenetworks.com/go/eu-weee weboldalra.

Svenska: För kunder inom EU: Alla produkter som uppnått sin livslängd måste returneras till Extreme Networks för återvinning. Information om hur du returnerar produkten finns på http://www.extremenetworks.com/go/eu-weee.

Suomi: Asiakkaat Euroopan unionin alueella: Kaikki tuotteet on palautettava kierrätettäväksi Extreme Networks-yhtiöön, kun tuotetta ei enää käytetä. Lisätietoja tuotteen palauttamisesta on osoitteessa http://www.extremenetworks.com/go/eu-weee

Dansk: Til kunder i EU: Alle produkter skal returneres til Extreme Networks til recirkulering, når de er udtjent. Læs oplysningerne om returnering af produkter på: http://www.extremenetworks.com/go/eu-weee.

Ελληνικά: Για πελάτες στην Ε.Ε.: Όλα τα προϊόντα, στο τέλος της διάρκειας ζωής τους, πρέπει να επιστρέφονται στην Extreme Networks για ανακύκλωση. Για περισσότερες πληροφορίες σχετικά με την επιστροφή ενός προϊόντος, επισκεφθείτε τη διεύθυνση http://www.extremenetworks.com/go/eu-weee στο Διαδίκτυο.

Malti: Għal klijenti fl-UE: il-prodotti kollha li jkunu waslu fl-aħħar tal-ħajja ta' l-użu tagħhom, iridu jiġu rritornati għand Extreme Networks għar-riċiklaġġ. Għal aktar tagħrif dwar kif għandek tirritorna l-prodott, jekk jogħġbok żur: http://www.extremenetworks.com/go/eu-weee.

Românesc: Pentru clienţii din UE: Toate produsele, la sfârşitul duratei lor de funcţionare, trebuie returnate la Extreme Networks pentru reciclare. Pentru informaţii despre returnarea produsului, accesaţi: http://www.extremenetworks.com/go/eu-weee.

Slovenski: Za kupce v EU: vsi izdelki se morajo po poteku življenjske dobe vrniti podjetju Extreme Networks za reciklažo. Za informacije o vračilu izdelka obiščite: http://www.extremenetworks.com/go/eu-weee.

Slovenčina: Pre zákazníkov z krajín EU: Všetky výrobky musia byť po uplynutí doby ich životnosti vrátené spoločnosti Extreme Networks na recykláciu. Bližšie informácie o vrátení výrobkov nájdete na: http://www.extremenetworks.com/go/eu-weee.

Lietuvių: ES vartotojams: visi gaminiai, pasibaigus jų eksploatacijos laikui, turi būti grąžinti utilizuoti į kompaniją „Extreme Networks". Daugiau informacijos, kaip grąžinti gaminį, rasite: http://www.extremenetworks.com/go/eu-weee.

Latviešu: ES klientiem: visi produkti pēc to kalpošanas mūža beigām ir jānogādā atpakaļ Extreme Networks otrreizējai pārstrādei. Lai iegūtu informāciju par produktu nogādāšanu Extreme Networks, lūdzu, skatiet: http://www.extremenetworks.com/go/eu-weee.

Türkçe: AB Müşterileri için: Kullanım süresi dolan tüm ürünler geri dönüştürme için Extreme Networks'ya iade edilmelidir. Ürünlerin nasıl iade edileceği hakkında bilgi için lütfen şu adresi ziyaret edin: http://www.extremenetworks.com/go/eu-weee.

6 CHAPTER

Customer Support

Extreme Networks Technical Assistance Centers (TAC) provide 24x7x365 worldwide coverage. These centers are the focal point of contact for post-sales technical and network-related questions or issues. TAC will create a Service Request (SR) number and manage all aspects of the SR until it is resolved. For a complete guide to customer support, see the Technical Assistance Center User Guide at:

http://www.extremenetworks.com/go/TACUserGuide

The Extreme Networks eSupport website provides the latest information on Extreme Networks products, including the latest Release Notes, troubleshooting, downloadable updates or patches as appropriate, and other useful information and resources. Directions for contacting the Extreme Networks Technical Assistance Centers are also available from the eSupport website at:

https://esupport.extremenetworks.com

Registration

If you have not already registered with Extreme Networks using a registration card supplied with your product, you can register on the Extreme Networks website at:

http://www.extremenetworks.com/go/productregistration

Altitude™ 4522 Series Access Point Installation Guide

Documentation

Check for the latest versions of documentation on the Extreme Networks documentation website at:

http://www.extremenetworks.com/go/documentation

7 CHAPTER AP4522 Series Access Point China ROHS Compliance

部件名称 (Parts)	有毒有害物质或元素					
	铅 (Pb)	汞 (Hg)	镉 (Cd)	六价铬 (Cr^{6+})	多溴联苯 (PBB)	多溴二苯醚 (PBDE)
金属部件 (Metal Parts)	O	O	O	O	O	O
电路模块 (Circuit Modules)	X	O	O	O	O	O
电缆及电缆组件 (Cables and Cable Assemblies)	X	O	O	O	O	O
塑料和聚合物部件 (Plastic and Polymeric Parts)	O	O	O	O	O	O
光学和光学组件 (Optics and Optical Components)	O	O	O	O	O	O
电池 (Batteries)	O	O	O	O	O	O

O：表示该有毒有害物质在该部件所有均质材料中的含量均在 SJ/T11363-2006 标准规定的限量要求以下。

X：表示该有毒有害物质至少在该部件的某一均质材料中的含量超出 SJ/T11363-2006 标准规定的限量要求。

对销售之日的所售产品，本表表示，公司供应链的电子信息产品可能包含这些物质。注意：在所售产品中可能会也可能不会含有所有所列的部件。

This table was created to comply with China RoHS requirements for Extreme Networks AP4522 Series Access Points.